


REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on January 9, 2003, and the references cited therewith.

Claims 1-5, 10, 12, 14-15, and 17-41 are amended; as a result, claims 1-42 are now pending in this application.

In the Drawings

Applicant is submitting proposed amendments to the original drawings, and is submitting new Figures 10-13, to satisfy the requirements of 37 CFR 1.83(o). 

No new matter has been added. Support for the amendments to Figures 10-13 may be found in the specification as originally filed. The proposed amendments are shown in replacement formal drawing sheets.

In Figure 10, text labels "DIE" and "CIRCUIT MODULE" has been added in boxes labeled 710 and 800, respectively.

In Figure 11, text labels "MEMORY DEVICE" and "PRINTED CIRCUIT BOARD" has been added in boxes labeled 910 and 915, respectively.

In Figure 12, text labels "CIRCUIT MODULE" and "ELECTRONIC SYSTEM" has been added in boxes labeled 800 and 1000, respectively.

In Figure 13, text labels "MEMORY MODULE", "MEMORY DEVICE", and "MEMORY CONTROLLER" has been added in boxes labeled 900, 910, and 1110, respectively.

A complete set of clean figures is included with this response.

In the claims

Claims 4, 12, 14, and 15 were objected for informalities. Accordingly, claims 4, 12, 14, and 15 have been amended to overcome the Examiner's objection. In addition, the Applicant has carefully reviewed all of the pending claims and has made several proposed amendments to correct for grammatical and/or antecedent basis problems. Furthermore, substantive amendments have also been made.

The specific substantive amendments to claims will now be discussed.

In claims 1-5, 19-20, and 26-34, as well as in all other applicable claims, language has been added to couple the output of each of the pre-boot pre-charge capacitors to the output of the first and second preboot capacitors. In addition in claims 1-5, 19-20, and 26-34, language has been added to output a pump voltage higher than a supply voltage by the first and second main pump capacitors through the first and second gating devices.

In claims 21 and 22, as well as in all other applicable claims, language has been added to couple the output of each of the pre-charging states to the output of the first and second preboosting stages. In addition, language has been added to couple the first and second gating devices to the first and second main energy storing devices.

In claims 23 and 25, as well as in all other applicable claims, language has been added to couple the output of each of the pre-boot pre-charge capacitors to the output of the first and second preboot capacitors.

In claim 24, as well as in all other applicable claims, language has been added to couple the output of the first and second pre-boot precharge circuitry to the first and second pre-boot circuitry.

Support for the above amendments can be found in the original specification on page 8, lines 24-27; page 11, lines 2-15; page 15, lines 17-25; and in Figures 2 and 4.

In claim 35, as well as in all other applicable claims, language has been added to output first and second main pump charges to a Vccp through first and second gating devices during the first and second phases, respectively. In claims 36-41, as well as in all other applicable claims, language has been added to output first and second main pump charges to a Vccp through first and second p-channel gates during the first and second phases, respectively. Support for the added language in claims 35-41 can be found in the original specification on page 8, lines 24-27; page 11, lines 2-15; page 15, lines 17-25; and in Figures 2 and 4.

All of the above-mentioned amendments to claims 1-5, 19-41 are supported by the application as originally filed. No new matter has been added.

§102 Rejections of the Claims

Claims 1-5, 7, 8, 10, 12, 14, 15, 17, 19-26, and 35-42 were rejected under 35 USC § 102(b) as being anticipated by Merritt (U.S. Patent No. 5,828,095).

Claims 1-5, 7, 8, 10, 12, 14, 15, 17, 19-26, and 35-42 were rejected under 35 USC § 102(e) as being anticipated by Cha (U.S. Patent No. 6,225,854).

Claims 1-5, 7, 8, 10, 12, 14, 15, 17, 19-26, and 42

As now amended, claims 1-5 and 19-26 are respectfully asserted to distinguish over the Merritt and Cha references. None of these references disclose *inter alia* coupling the output of each of the pre-boot pre-charge capacitors to the output of the first and second pre-boot capacitors, respectively. In addition, none of these references disclose *inter alia* outputting a pump voltage higher than a supply voltage through the first and second gating devices.

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For the reasons stated above, claims 1-5 and 19-26 should be found allowable over the Merritt and Cha references. Moreover, Applicant considers additional elements and limitations of claims 1-5 and 19-26 to further distinguish over the cited references, and Applicant reserves the right to present arguments to this effect at a later date.

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Claims 7, 8, 10, 12, 14, 15, 17, and 42, which depend directly or indirectly from claims 1 and 5 and incorporate all of the limitations therein, are also asserted to be allowable for the reasons stated above.

Applicant respectfully requests that the rejection of claims 1-5, 7, 8, 10, 12, 14, 15, 17, 19-26, and 42 under 35 USC § 102(b) as anticipated by Merritt and Cha be withdrawn, and that claims 1-5, 7, 8, 10, 12, 14, 15, 17, 19-26, and 42 be allowed.

Claims 35-41

As now amended, claim 35 is respectfully asserted to distinguish over the Merritt and Cha references. None of these references disclose *inter alia* outputting a first and second main pump charges to a Vccp through first and second gating devices during the first and second phases. Similarly, claims 36-41 are respectfully asserted to distinguish over the Merritt and Cha references. None of these references disclose *inter alia* outputting first and second main pump charges to a Vccp through first and second p-channel gates during the first and second phases.

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For the reasons stated above, claims 35-41 should be found allowable over the Merritt and Cha references. Moreover, Applicant considers additional elements and limitations of claims 35-41 to further distinguish over the cited references, and Applicant reserves the right to present arguments to this effect at a later date.

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Applicant respectfully requests that the rejection of claims 35-41 under 35 USC § 102(b) as anticipated by Merritt and Cha be withdrawn, and that claims 35-41 be allowed.

§103 Rejection of the Claims

Claims 6, 9, 11, 13, 16, 18, and 27-34 were rejected under 35 USC § 103(a) as being unpatentable over Merritt.

Applicant respectfully traverses the single-reference rejection.

Applicant respectfully finds that the above-cited reference fails to support a *prima facie* case of obviousness because the cited reference fails to teach or suggest all of the elements of Applicant's invention. Applicant will address the rejections in detail as follows:

As now amended, claims 5 and 27-34 are respectfully asserted to distinguish over the Merritt and Cha references. Merritt does not disclose *inter alia* coupling the output of each of the pre-boot pre-charge capacitors to the output of the first and second pre-boot capacitors, respectively. In addition, Merritt does not disclose *inter alia* outputting a pump voltage higher than a supply voltage through the first and second gating devices.

Claims 6, 9, 11, 16, and 18, which depend directly or indirectly from claim 5 and incorporate all of the limitations therein, are also asserted to be allowable for the reasons stated above.

For the above reasons claims 6, 9, 11, 13, 16, 18, and 27-34 should be found allowable over the Merritt reference, and Applicant respectfully requests that the rejection of claims 6, 9, 11, 13, 16, 18, and 27-34 as unpatentable over Merritt under 35 USC § 103(a) should be withdrawn.

As described above, if the Examiner is using personal knowledge or is taking Official Notice of the elements of claims 6, 9, 11, 13, 16, 18, and 27-34 which are not found in the Merritt patent, Applicant respectfully requests that the Examiner either provide a reference or references which describe such missing elements pursuant to M.P.E.P § 2144.03, or submit an affidavit as required by 37 C.F.R. § 1.104(d)(2).

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CONCLUSION

Applicant respectfully submits that the claims 1-42 are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Kash Nama, at (603) 888-7958 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By his Representatives,

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Date

May 12, 2003

By

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Box AF, P.O. Box 1450, Alexandria, VA 22313-1450, on this 12 day of April, 2003.

Gina M. Uphus

Name

Signature

Gina Uphus